

the second fortnight of December, 1982. Casting of single spike antlers in these two specimens were recorded in the last week of February, 1983. As expected the coronet or burr was absent in single spike antlers.

These observations suggest that the knob like pedicels appear at the age of approximately seven months, rubbing off the velvet starts at the age of about one year and casting of the first set of single spike antlers occurs at the age of about 1 year and 2½ months.

CASTING INTERVAL

The casting interval observed in seven instances among four specimens varies from 338

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to 375 days. The stags cast their antlers annually.

The casting interval reported twice in a stag was 347 and 383 days (Acharjyo, loc. cit.).

SIZE AND WEIGHT OF CAST ANTLERS

Three of the cast single spike antlers measured (weighed) as follows: 6 cm (13.250 gm); 7.5 cm (16.500 gm) and 9 cm (23.200 gm). Maximum length of cast antlers on the outside curve recorded twice was 43 cm each. The maximum weight of two cast antlers of a stag recorded once was 271 gm (right) and 260 gm (left).

The average horns of Indian Hog-Deer measure 30 to 38 cm but the Burmese stags carry antlers upto 61 cm (Prater 1971).

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2. A NOTE ON THE LONGEVITY AND FERTILITY OF THE BLACKBUCK, *ANTILOPE CERVICAPRA* (LINNAEUS)

During my tenure as District Forest Officer of Vellore Division in North Arcot District of Tamil Nadu, in response to my usual ques-

tions about animals, birds, ancient temple ruins, forts etc; inside reserved forests, a Forest Watcher replied that in his jurisdiction there

MISCELLANEOUS NOTES

were three deer like animals without horns and without spots in the Alliyalamangalam Reserved Forest. He also added that they were there for nearly 20 years and that there were no signs of young ones. He had not seen them himself but that was what he had heard from a villager in that locality. This happened in mid 1967.

The next day being curious to see the animals I took with me this watcher, the forest guard and a man of that locality who had seen these three animals and was familiar with the isolated forest block. The Alliyalamangalam Reserved Forest lies 145 km south west of Madras and 25 km south east of Polur in North Arcot district. Its total area is 3043.27 ha, of which, 1970 ha remains even today planted up with hybrid Eucalyptus and the rest holds a natural scrub forest of thorny bushes and short trees thriving under an annual rainfall of about 500 mm. The reserve is practically a level country of red soil, the unplanted portion being hard stony soil with a small rounded hillock at one end. Close to the foot of the hillock runs the reserve boundary, beyond which is a vast stretch of dry cultivated lands, except for civets, mongoose, jungle cat and jackal there were no other carnivores; deer were also absent in that reserve.

As we approached the hillock by jeep through the reserve forest, we were cautioned that the three animals normally rested at the foot of the hillock and would run to the cultivated open lands at the sight of jeep or man. That is what happened when our jeep was 200 metres from the foot of the hillock, when out dashed three blackbuck adult females racing across the vast expanse of cultivated lands which had no crops at that time. The following day also the same thing happened and the three blackbuck adult females alone were to be seen. The nearest village and habitation from

that spot was about two kilometres away where I learnt that in the nineteen thirties and forties, when the whole reserve was a natural thorn forest, the population of blackbuck was about 150 to 200 and that during world war II both Indian and foreign army personnel used to come in jeeps for shikar, shoot and take away even upto three at a time and that the present three blackbuck females were the only animals left over from the original stock. The three blackbuck still associated jeep and man with war time killings, a memory that enabled them to survive all these years. Assuming that, even though war ended in 1946, the same poaching would have continued till 1950, it would be reasonable to deduce that these three blackbuck females went without a male from 1950. I came into the scene in mid 1967.

With a view to rebuilding the blackbuck population in that reserve I got an adult male and female from Guindy Park Reserved Forest in Madras during November-December 1967 and released them near the hillock; the female died in a couple of days due most probably to injury sustained during capture and transport; the male being unafraid of man strayed a few days later into another nearby village where it was promptly killed and shared. Later, in 1968 November-December I got another adult male and female from Guindy Park Reserved Forest and released them near the hillock. I also took pains to visit the nearby villages and do propoganda about the introduction of the pair to the company of the remnant three and mustered their support to protect the blackbuck. The villagers got enthusiastic and assured me that they would see that no poacher was allowed to shoot, which promise they have kept up even today. I understand. Soon after that I left Vellore on transfer.

In 1973 when I was touring in Vellore division as Conservator of Forests I had the blackbuck population counted by the Rangers and Foresters as news came that they had multiplied. The count came to 11 animals. After that I lost track of the population there till June 1982 when the present Chief Wildlife Warden (Mr. K. Shanmuganathan) took the trouble to have the blackbuck counted and informed me in particular that there were 92 animals in Alliyalamangalam Reserved Forest.

When I mentioned this interesting experience to Dr. Rauf Ali, formerly of the Bombay Natural History Society and Indian Institute of Science, Bangalore, he suggested that I report this to you for record and publication as

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it is a useful information on the longevity and fertility of blackbuck under natural conditions. It was nearly 14 years since an adult male was added to the original three females. Of course another female was also introduced with the male as already mentioned. Now two points come up for consideration. Firstly, from 1950 to 1968, over a period of atleast 15 years the three females had gone without a male and in 1968 when I introduced the male I had doubted if they would be fertile. But contrary to my misgivings they had remained fertile and readily multiplied. Secondly, this seems to be the only authentic record of three blackbuck females living for at least 15 years under natural conditions.

G. J. RAJASINGH

3. HORN GROWTH IN BLACKBUCK (With a text-figure)

While techniques such as tooth-eruption, replacement, and wear help estimation of age of mammals to the accuracy of months, for their age determination in the field, a biologist too often will be content with age categories such as fawn, adolescent, sub-adult, adult, and old. The growth of antlers in deer such as barasingha (Martin 1977) and horn growth in sheep (Taber 1971) and blackbuck (Mungall 1978) were used as criteria for age estimation in the field. The horn growth of a blackbuck fawn, *Kiran*, which was observed for a period of 2 years and 3 months since its birth is presented in this paper.

A fawn of 3-4 days old was captured by a cultivator of Kolpur village in Mahabubnagar District of Andhra Pradesh from jowar fields on 19-2-1978. This fawn, *Kiran*, after being

tamed for over 3 months by him, was brought to the well fenced Mahavir Harin Vanasthali Blackbuck Sanctuary in Hyderabad by the D.F.O. (Wildlife) of Achampet on 2-6-1978. From then onwards its horn growth was observed through 4-4-1980. The horn length was measured straight from the base to its tip. The number of rings added in the horn since the previous observation was also recorded. Further records could not be made as the animal died.

RESULTS

The addition of rings in the horns over a period of time is shown in fig. 1. Till it was 5 months old there was no sign of horn growth. Later bumps appeared on the head which were